



April 22, 2016

Ms. Joni Anderson, President
Anderson Burton Construction, Inc.
1131 El Camino Real
City of Arroyo Grande, CA 93420

Subject: City of Arroyo Grande Comment Letter, 686 Erhart Lane Project

Dear Ms. Anderson:

Cleath-Harris Geologists (CHG) considered the City of Arroyo Grande water wells in the Pismo Formation and historic City of Arroyo Grande groundwater production from the Oak Park area in our impact analysis referred to in our first Addendum (June 2, 2015). The City's comment letter noted that the water production numbers for the City were not up to date and requested that the metered groundwater production and water conservation measures be a condition of approval. As we understand it, you have agreed to the conditions of approval for metering and water conservation.

In response to the City's comments, updated groundwater production records were obtained from Shane Taylor and Paul Sorensen. In light of these records, CHG herein provides a discussion of the impact of these updated numbers on the groundwater production for the Oak Park area in our review of groundwater yield in the Oak Park area.

UPDATED CITY OF ARROYO GRANDE GROUNDWATER PRODUCTION

The City of Arroyo Grande provided water production from the Pismo Formation wells (no differentiation is made for the specific aquifer from which the water is pumped in the Pismo Formation).

Calendar Year Groundwater Production from Pismo Formation wells (acre-feet)

2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Average 2006- 2015	Average 2011- 2015	Average 2014- 2015
0	16	67	80	70	140	150	120	69	44	76	105	56

The City currently produces water from Wells #9 and #10 within the Oak Park area and plans to put Well #11 on line in 2016. The City plans to equip Well #11 with a 45 gallons per minute pump and plans to produce 40 acre-feet per year from this well.

In estimating the water production from the City wells for use in the groundwater balance, it is important to determine what is the most appropriate duration of pumpage over which to select an average amount. The historic production is highly variable as can



be seen in the annual amounts. The variability is due to the operational status of individual wells and the City priorities in producing from their various sources. While the City documents indicate their plans to produce the maximum quantity from the Pismo Formation wells, the actual production has been significantly less. For inclusion in the updated groundwater production totals of the Hurley Ranch project, CHG uses the 2011-2015 average of 105 acre-feet per year.

GROUNDWATER PRODUCTION AND SAFE YIELD

The previous investigations have estimated a safe yield for the Oak Park area of 540 acre-feet per year. Although the historic groundwater analyses for the Los Robles del Mar project apportioned the safe yield by aquifer, differentiating the safe yield of a groundwater basin by aquifer is not standard practice in groundwater impact analyses and is not recommended for this project's impact analysis. Furthermore, the distribution of pumping between aquifers within the Oak Park area can only be grossly estimated and should not be used to allocate the safe yield of the Oak Park area between aquifers. Therefore, CHG approach using the total groundwater production estimate and safe yield estimate for the Oak Park area is appropriate.

The modified values to the 6/2/2015 Addendum cumulative projects groundwater production estimates that reflects 105 AFY City average historic groundwater production and a 200 AFY future groundwater production are as follows:

Category	Previous	Updated
Total Current Production	248 AFY	303 AFY
Total Current Production with Project Production	269.6	324.6
Cumulative Project Production	303-313 AFY	453-463 AFY

This increased existing and cumulative annual production estimates including the updated information for the City of Arroyo Grande Pismo Formation wells are less than the estimated safe annual yield from the Oak Park area.

Sincerely,
CLEATH-HARRIS GEOLOGISTS

Timothy S. Cleath, CHG 81
President